IN THE CLAIMS:

Please amend claims 1, 7, 12,14, 18, 22, 23, and 26 as follows:

1. (Currently amended) A multi-path searching device comprising:

a despreading unit for despreading received I and Q signals;

an accumulator for accumulating the despread I and Q signals from the dispreading unit;

a beam-forming unit for beam-forming the accumulated I and Q signals from the accumulator;

an energy detecting unit for detecting a larger energy value between the energy values of the I and Q signals respectively from the beam-forming unit; and

a control unit for comparing the larger energy value detected by the energy detecting unit with a threshold and setting a corresponding signal of the larger energy value as a decision variable[[,]] if the larger energy value is greater than the threshold.

2. (Original) The device of claim 1, wherein the beam-forming unit comprises a plurality of beam-forming means.

3. (Original) The device of claim 2, comprising a plurality of antennas, wherein the beam-forming unit comprises as many beam-forming means as the plurality of antennas.

4. (Original) The device of claim 2, wherein the beam-forming means is a switched beam-forming means.

5. (Original) The device of claim 2, wherein the plurality of beam-forming means are arranged in parallel.

6. (Original) The device of claim 2, wherein each of the beam-forming means comprises a plurality of fixed-beam beam formers.

7. (Currently amended) The device of claim 3, wherein each of the beam-forming means comprises a plurality of fixed-beam beam formers, the ~~wherein~~ number of ~~the plurality of~~ fixed-beam beam formers ~~is approximately~~ equal to the number of antennas.

8. (Original) The device of claim 6, wherein at least one of the fixed-beam beam formers outputs a beam-formed I signal by adding a value obtained from multiplying an accumulated I signal by a predetermined weight vector for an I signal to a value obtained by multiplying an accumulated Q signal by a predetermined weight vector for a Q signal.

9. (Original) The device of claim 8, wherein at least one of the fixed-beam beam formers outputs a beam-formed Q signal by adding a value obtained from multiplying the accumulated I signal by a predetermined weight vector for a Q signal to a value obtained by multiplying the accumulated Q signal by a predetermined weight vector for an I signal.

10. (Original) The device of claim 9, wherein at least one of the fixed-beam beam formers obtains said beam-formed I signal $b_I^{(X,p-1)}$ and said beam-formed Q signal $b_Q^{(X,p-1)}$ based on the following:

$$b_I^{(X,p-1)} = Y_I \times W_I^{(X,p-1)}(\theta) + Y_Q \times W_Q^{(X,p-1)}(\theta) \quad ; (X = 0, 1, 2, 3, \ldots, P-1)$$

$$b_Q^{(X,p-1)} = Y_I \times W_Q^{(X,p-1)}(\theta) + Y_Q \times W_I^{(X,p-1)}(\theta) \quad ; (X = 0, 1, 2, 3, \ldots, P-1),$$

wherein the $W_I^{(X,p-1)}(\theta)$ denotes a weight vector for an I signal of Xth fixed-beam beam former included Pth beam-forming means, and the $W_Q^{(X,p-1)}(\theta)$ denotes a weight vector for a Q signal of Xth fixed-beam beam former included Pth beam-forming means.

11. (Original) The device of claim 8, wherein at least one of the beam-forming means respectively adds the beam-formed I signals and the beam-formed Q signals outputted from the fixed-beam beam formers to respectively produce an added I signal and an added Q signal.

12. (Currently amended) The device of claim 11, wherein the ~~in said~~ at least one beam-forming means respectively outputs the added I signal and the added Q signal.

13. (Original) A multi-path searching method comprising:

despreading received I and Q signals;

accumulating the despread I and Q signals respectively;

splitting the despread I/Q signals by a plurality of beam-forming means;

performing a beam-forming for the split I/Q signals;

detecting energy of the beam-formed signals to find a largest energy value;

comparing the detected largest energy value with a threshold; and

setting a corresponding signal of the largest energy value as a decision variable, if the largest energy value is greater than the threshold.

14. (Currently amended) The method of claim 13, wherein the I and Q signals are received via a plurality of antennas, and wherein the number of ~~the~~ beam-forming means is ~~approximately~~ equal to the number of ~~the~~ antennas.

15. (Original) The method of claim 13, wherein the plurality of beam-forming means are arranged in parallel.

16. (Original) The method of claim 13, wherein the beam-forming means is a switched beam-forming means.

17. (Original) The method of claim 13, wherein each of the beam-forming means includes a plurality of fixed-beam beam formers.

18. (Currently amended) The method of claim 14, wherein at least one of the beam-forming means comprises ~~approximately~~ the same number of fixed-beam beam formers as ~~that of~~ the number of antennas.

19. (Original) The method of claim 17, wherein each of the fixed-beam beam formers outputs a beam-formed I signal by adding a value obtained by multiplying the accumulated I signal by a predetermined weight vector for an I signal to a value obtained by multiplying the accumulated Q signal by a predetermined weight vector for a Q signal.

20. (Original) The method of claim 19, wherein at least one of the fixed-beam beam formers outputs a beam-formed Q signal by adding a value obtained by multiplying the accumulated I signal by a predetermined weight vector for a Q signal to a value obtained by multiplying the accumulated Q signal by a predetermined weight vector for an I signal.

21. (Original) The method of claim 19, wherein at least one of the beam-forming means respectively adds the beam-formed I signals and the beam-formed Q signals outputted from the fixed-beam beam formers.

22. (Currently amended) The method of claim 21, wherein the at least one ~~of the~~ beam-forming means respectively outputs the added I signal and the added Q signal.

23. (Currently amended) A multi-path searching device comprising:

a despreading unit for despreading received I and Q signals;

an accumulator for accumulating the despread I and Q signals from the dispreading unit;

a beam-forming unit comprising a plurality of beam-forming means each comprising a plurality of fixed-beam beam formers for beam-forming the accumulated I and Q signals from the accumulator;

an energy detecting unit for detecting a larger energy value between the energy values of the I and Q signals respectively from the beam-forming unit; and

a control unit for comparing the larger energy value with a threshold and setting a corresponding signal of the larger energy value as a decision variable, if the larger energy value is greater than the threshold.

24. (Original) The multi-path searching device of claim 23, wherein at least one of the fixed-beam beam formers outputs a beam-formed I signal by adding a first value to a second value.

25. (Original) The multi-path searching device of claim 24, wherein the first value is obtained by multiplying an accumulated I signal by a predetermined weight vector for an I signal.

26. (Currently amended) The multi-path searching device of claim 24, wherein the second value is obtained by multiplying an accumulated Q signal by a predetermined weight vector for a Q signal.

27. (Original) The multi-path searching device of claim 23, wherein at least one of the fixed-beam beam formers outputs a beam-formed Q signal by adding a third value to a fourth value.

28. (Original) The multi-path searching device of claim 27, wherein the third value is obtained by multiplying the accumulated I signal by a predetermined weight vector for a Q signal.

29. (Original) The multi-path searching device of claim 27, wherein the fourth value is obtained by multiplying the accumulated Q signal by a predetermined weight vector for an I signal.

30. (Original) The multi-path searching device of claim 23, wherein at least one of the fixed-beam beam formers obtains a beam-formed I signal $b_I^{(X,P-1)}$ and a beam-formed Q signal $b_Q^{(X,P-1)}$ based on the following:

$$b_I^{(X,P-1)} = Y_I \times W_I^{(X,P-1)}(\theta) + Y_Q \times W_Q^{(X,P-1)}(\theta) \text{ ; (X = 0, 1, 2, 3, ... , P-1)}$$

$$b_Q^{(X,P-1)} = Y_I \times W_Q^{(X,P-1)}(\theta) + Y_Q \times W_I^{(X,P-1)}(\theta) \text{ ; (X = 0, 1, 2, 3, ... , P-1),}$$

wherein the $W_I^{(X,P-1)}(\theta)$ denotes a weight vector for an I signal of Xth fixed-beam beam former included Pth beam-forming means, and the $W_Q^{(X,P-1)}(\theta)$ denotes a weight vector for a Q signal of Xth fixed-beam beam former included Pth beam-forming means.